New method to extract polyisoprene in Guayule without macromolecular structure degradation

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Introduction

Why to develop a new method for PI extraction ?

Polyisoprene Native macromolecular structure ?

Soft method on fresh biomass
Tetrahydrofuran
24 h – 30°C

SEC-MALS

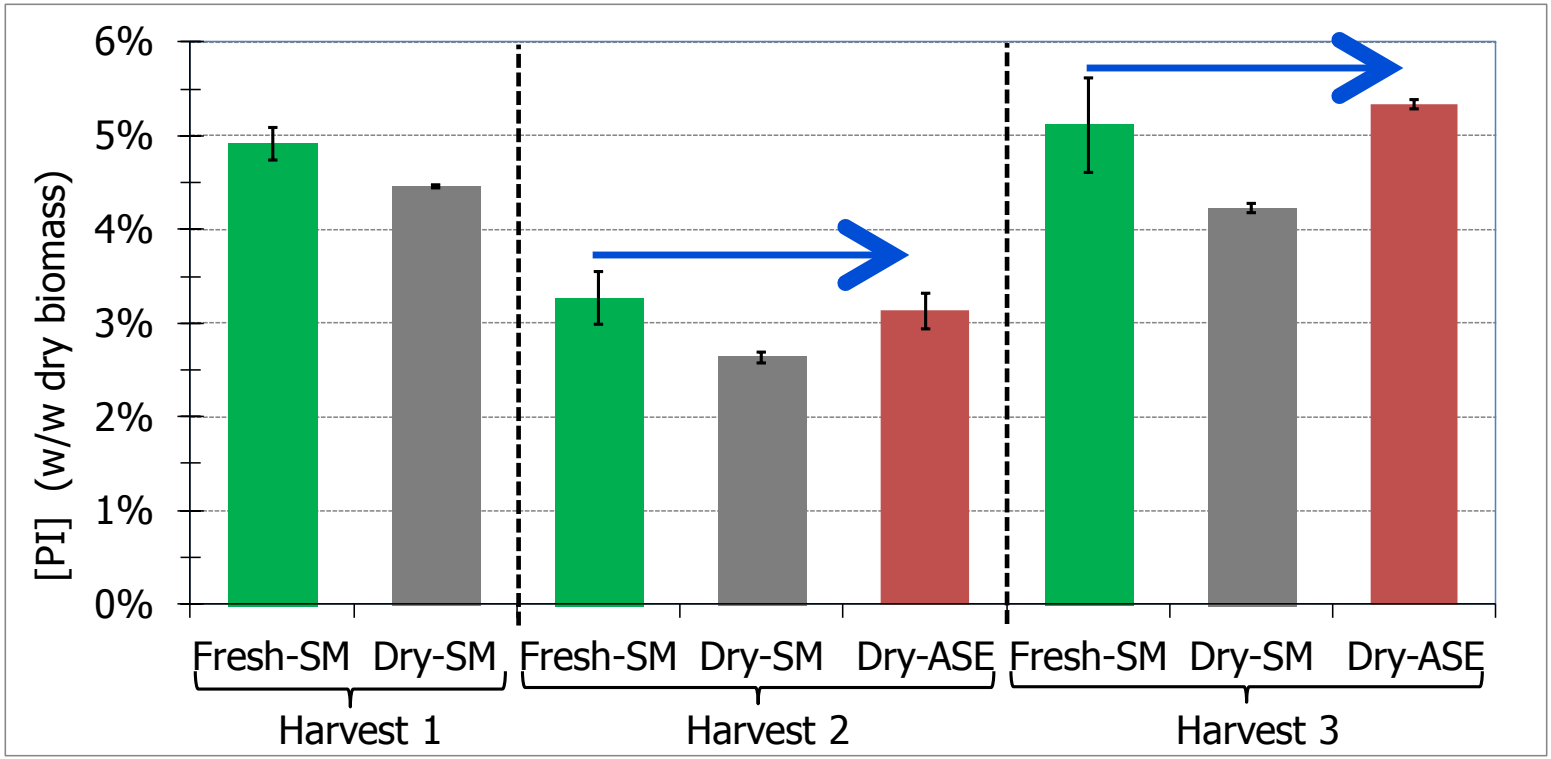
Mw and yield of extracted PI

Comparison to ASE method on dry biomass

Results: Extraction yield

Yield of extracted PI according the extraction method

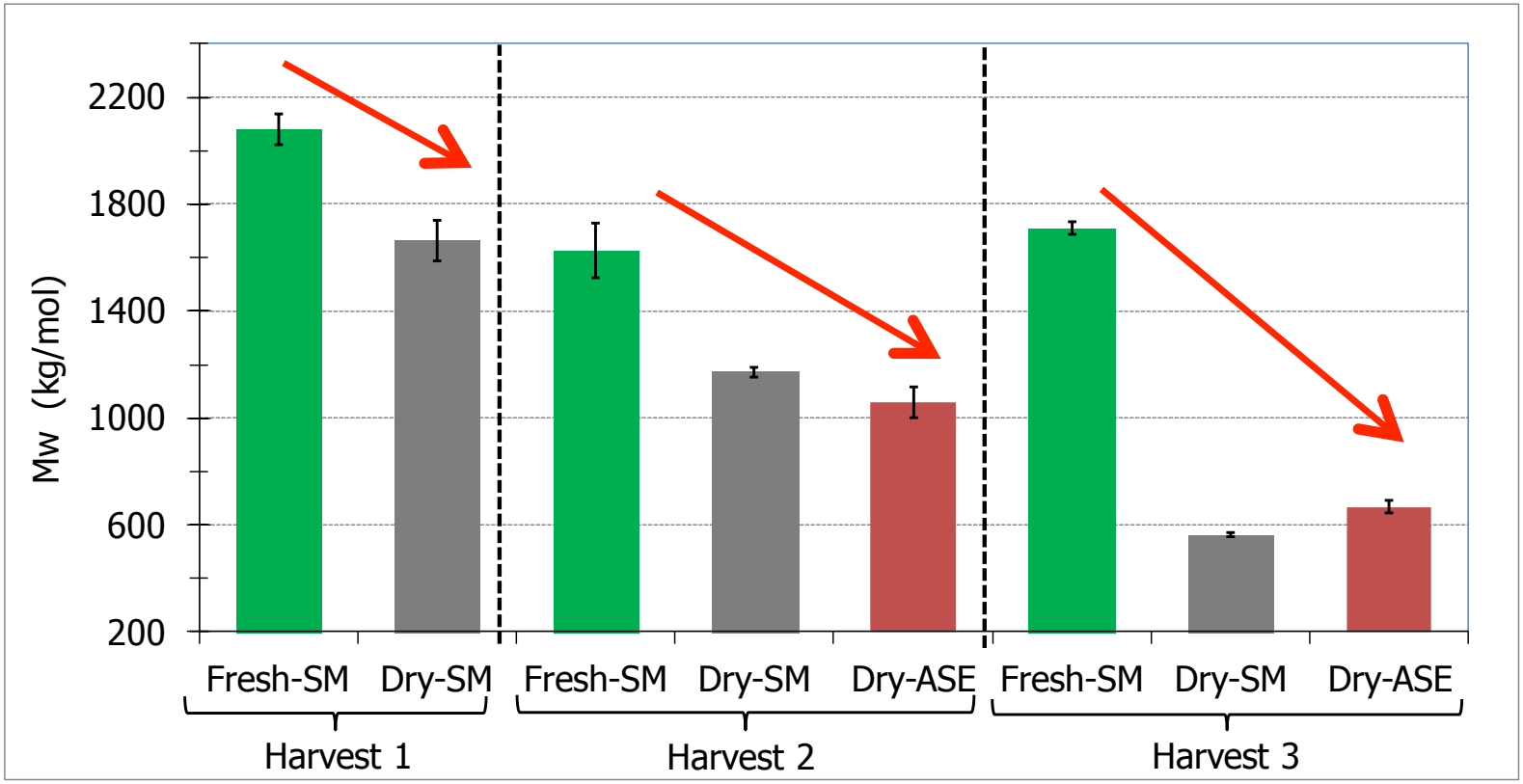
Fresh-SM: Fresh biomass – soft method / Dry-ASE: dry biomass – ASE method



➢ Same extraction yield between Fresh-SM and Dry-ASE

Results: Mw

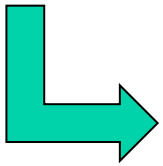
Mw of extracted PI according the extraction method



➢ Very high Mw for PI extracted with SM vs ASE

Conclusion

The use of SM is a real advantage allowing the use of fresh biomass (non dried).



To minimize the likelihood of thermal and oxidative degradation of the PI macromolecules during storage and drying.

Thank you for your attention